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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,457	08/19/2003	Brian Lester Halla	08211/0200237-US0/P05501	4123
38845	7590	12/23/2005	EXAMINER	
DARBY & DARBY P.C. P.O. BOX 5257 NEW YORK, NY 10150-5257			LEUBECKER, JOHN P	
			ART UNIT	PAPER NUMBER

3739

DATE MAILED: 12/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/643,457	HALLA ET AL.	
	Examiner	Art Unit	
	John P. Leubecker	3739	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 12-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/16/04, 8/24/04</u> | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Applicant's election with traverse of Group I in the reply filed on October 5, 2005 is acknowledged. The traversal is on the ground(s) that Applicant believes that the inventions are not independent. This is not found persuasive. Although Applicant requests that the Examiner set forth a materially different method to make the product (such different method being part of the basis for a showing that method is distinct from the product being made), it must be pointed out that the Examiner has done so in the previous Office Action.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 12-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the 1) covering (e.g., claim 3); 2) protective housing (e.g., claim 6); 3) the optically transmissive surface of the protective housing (e.g., claim 7); and 4) the lens (e.g., claim 9) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

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should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 4, 8, 19 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 4, term “the sensors” lacks antecedence as being plural since “a sensor” is previously claimed. In addition, “the electrical contacts of the optical circuitry” lacks antecedence.

As to claims 8 and 24, the open-endedness of the term “including” when describing the markush group is improper.

As to claim 19, recitation that the shell has a contour and that the combination of the sensor *and shell* “can be formed to the contour of *the shell*” is indefinite as to whether this language requires the sensor to take any particular form. Since the shell inherently is formed to the contour of itself, it is unclear whether or not this inherent fact is enough to satisfy the requirement that the “combination” is formed to contour. It is noted that the sensor and shell are only claimed as being “coupled” such that a “combination” does not necessarily imply contact, a fixed relationship, or any similarity in shape or contour whatsoever.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3 and 6-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Yokoi et al. (US 2003/0171653).

Referring mainly to Figure 7, Yokoi et al. disclose a capsule endoscope¹ including a shell (16,24,44, since the shell is not defined as including or excluding any particular structure, the Examiner is reading cover 44 and support 24 as being part of the shell); a support (24), and since

¹ It is noted that the term “capsule endoscope” is being afforded patentable weight in that it is deemed essential to point out the invention defined by the claims. Only by that term can it be known that the subject matter defined by

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part of the contour of the shell (16) is straight or flat (note top or bottom of Figure 7), the support (24) has “sufficient flexibility” (substantially none is sufficient here) to be formed to have a straight or flat contour; and a substrate (CMOS device 23) having a sensor (note mention of the image sensor surface in [0027]) being formed sufficiently thin so as to be formed in a straight or flat shape (note Fig.7). All elements of Figure 7 are “coupled” together, and specifically the substrate and support, the combination, as are the individual components, being formed in a flat or straight contour. As to claim 2 and defined above, the support (24), and thus the combination of support and substrate form a portion of the shell. As to claim 3, transparent cover (17) meets the limitation of a covering applied over at least a portion of the shell. As to claims 6 and 7, cover (44) and lens (42) form a protective housing including an optically transmissive surface. As to claim 8, the sensor surface of the CMOS device is at least an image sensor. As to claim 9, note lens (42). As to claim 10, all bases are covered here—support (24) is one or the other.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi et al. in view of Segawa et al. (US 2004/0027459).

the claims is comprised as a capsule endoscope. The term “capsule endoscope” is defined in the specification on page 4.

Yokoi et al. fails to disclose the particulars between the substrate/sensor (23) and the support. Segawa et al. discloses a similar device disclosing how one would go about making the electrical connections between the substrate/sensor (24) and the support (25). Particularly noting Figures 5A and 5B, note electrical contact pads (25a), electrical contacts (62,63) and protective covering (65,66). Without any particulars disclosed by Yokoi et al. it would be obvious to the ordinarily skilled artisan to have turned to the prior art to realized the particular connections between the substrate/sensor and support.

10. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi et al. in view of Penner et al. (US 2004/0032187) in view of McGrath (U.S. Pat. 6,169,318).

Yokoi et al. fails to disclose the particulars of the materials used for the support and substrate. Penner et al. teaches that a conventional support for a sensor package comprises a copper/polymide laminate ([0079]) and McGrath clearly demonstrates that a typical substrate in a CMOS image sensor (which is what Yokoi et al. employs) comprises silicon (col.4, lines 4-18). It would not be considered invention and would be obvious to one of ordinary skill in the art to, when reducing the device of Yokoi et al. to practice, “fill in the gaps” with what is already known or conventional in the prior art.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi et al. in view of McGrath.

Yokoi et al. disclose a sensor comprising a CMOS image sensor but fails to provide the particulars. Since the “S” in CMOS stands for semiconductor and silicon is probably the most

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well recognized semiconductor in the electronic art, it would be reasonable to assume that one of ordinary skill in the art would recognize that the substrate in the CMOS image sensor package of Yokoi et al. would, if not inherently, obviously include a silicon material. However, McGrath clearly demonstrates that a typical substrate in a CMOS image sensor comprises silicon (col.4, lines 4-18).

12. Claims 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokoi et al. in view of Yu (U.S. Pat. 6,300,612).

Yokoi et al. discloses the elements as described above with respect to like elements in claims 19-23. Yokoi et al. fails to mention the particulars of the image sensor (CMOS). Yu discloses that image sensors made from organic semiconductors have been contemplated (note title) and are at least an alternative to, if not equivalent, silicon technology (e.g., col.21, lines 31-34). Without any particulars disclosed by Yokoi et al. it would have been obvious for one of ordinary skill in the art to have drawn from what is known in the art to understand and/or reduced to practice the technology disclosed by Yokoi et al.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Iddan (US 2003/0195415)

Kimchy et al. (US 2004/0054278)

Irion (US 2004/0249245)

Iddan (US 2004/0254455)

Barbato et al. (US 2003/0130562)

Penry (U.S. Pat. 6,049,094)

Shinohara et al. (U.S. Pat. 5,177,670) Ireland et al. (U.S. Pat. 6,348,411)

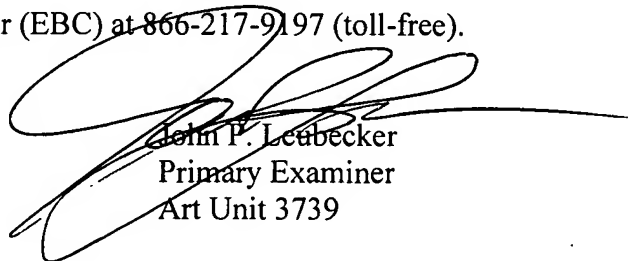
Ohno et al. (U.S. Pat. 4,467,361) McKenna et al. (U.S. Pat. 6,261,226)

Hokari (U.S. Pat. 6,285,400) Hamm et al. (U.S. Pat. 6,839,135)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Leubecker whose telephone number is (571) 272-4769. The examiner can normally be reached on Monday through Friday, 6:00 AM to 2:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda C.M. Dvorak can be reached on (571) 272-4764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John P. Leubecker
Primary Examiner
Art Unit 3739

jpl